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## Commentary

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In “Measuring and Analyzing Aggregate Fluctuations: The Importance of Building from Microeconomic Evidence,” John Haltiwanger summarizes a large body of research, much of it in which he has been involved, on what can be learned from establishment and company data on fluctuations at the micro level in employment, output, investment, and total factor productivity (TFP) growth. What he finds is that—below the surface of an economy whose aggregate measures may be tranquil—there are many acts of creation, destruction, and relocation. To achieve a better understanding of the movements of macro aggregates, we need a better understanding of the nature of this underlying micro level activity. In the areas of employment gains and losses, or establishment openings and closings, there are typically large gross changes that may have little net effect. And depending on the cyclical position of the economy, the same gross economic movements may be associated with different net movements. The research Haltiwanger has described has had an effect on the way we think about unemployment, investment decisions, and sources of productivity growth. Such findings cannot be overstated; macro theory must now take account of the patterns that Haltiwanger describes.

Haltiwanger also clearly identifies the limitations that underlie this research, particularly with respect to the merging of different data sets—a task that has become even more difficult since 1988 when the scope of the Annual Survey of Manufactures was narrowed to eliminate duplication of data collection. Haltiwanger makes a strong case for maintaining a longitudinal database on establishments that

would permit us to better understand the underpinnings of macroeconomic fluctuations and growth. Haltiwanger also calls attention to the care that researchers need to take in using the data, and he provides a particularly good example—research into the interaction between human skill and physical capital and technology—of why such caution is needed. My colleague, Bob Summers, in his frustration with poorly informed users, longs for a software feature that would permit people to use the data we distribute only after they have read the appendix and perhaps passed an examination—a wish Haltiwanger appears to share when it comes to the data sets he has so fruitfully developed and analyzed.

In the big picture of measuring and understanding the growth process, Haltiwanger reports on some significant findings. First is the major role labor reallocation played during 1973-93, when total job destruction plus job creation was nearly 20 percent of the manufacturing labor force. Haltiwanger also points out that the cyclical pattern of job loss is much more volatile than the pattern of job creation, so recessions may be thought of as an increase in job loss, relative to creation, and economic expansion as a period when job creation continues and job loss falls. He describes how, generally, TFP grows because new establishments are more productive than those leaving an industry. Finally, Haltiwanger discusses a remarkable nonlinearity in investment response that shows a very small response to small deviations of desired capital stock from actual capital stock, a still smaller response of firms with much more capital than desired, and a large positive response of firms with substantially less capital than they desire. My comments will raise some further questions about the Haltiwanger view of establishments, and I will discuss some of his recommendations on data collection.

## REGIONAL JOB CREATION

I would like to go behind the result about the cyclical character of job creation and job destruction, a phenomenon that has been taken up by others. For example, Blanchard and Diamond (1990) use these results to suggest that Schumpeter did not correctly describe creative destruction. They report that because job creation goes on at a fairly stable rate, it is job destruction that produces cycles in employment. The Schumpeter notion that innovations generate cycles of job expansion and subsequent destruction would seem to have little support. Can we really make this interpretation? Might not location be a factor here?

We observe substantial differences in the net effects of allocation and worker turnover in the United States, with 1996 state unemployment rates ranging from 3 percent to more than 7 percent. Can we think of the establishment results as a one-to-one mapping with regional developments? Particularly, is the story described for establishments as a whole likely to hold for regions? Perhaps job creation appears much more volatile across states than for the country as whole.

In their new book, Davis, Haltiwanger, and Schuh (1996) look at job creation and job destruction across the nine regions of the United States throughout 1973-88. They find more variation in creation than in destruction across regions. They find that the reallocation effect across industries is 3.1 percent and 1.7 percent across regions. They interpret these findings as indicating that factors affecting reallocation across industries within manufacturing are greater than regional effects.

Additional evidence is contained in the study on turnover by Anderson and Meyer (1994). Their data were based on state unemployment insurance records, although they covered only six states. However, for what it is worth, in that cross section (where there was net job creation in four of the six states), job creation showed more variation than job destruction. These data cover all sectors, not just manufacturing. If spatial concentration of

job destruction occurs in some areas and job creation occurs in other areas, one would want to draw somewhat different inferences from the results Haltiwanger describes than from those of Blanchard and Diamond. One could imagine a scenario where job creation is very uneven across regions, even though on average the rate throughout all regions is fairly stable.

This is what Eberts and Montgomery (1995), who have examined employment creation and destruction across regions, report: Regional patterns of job creation are quite variable. For expanding regions, net employment is mainly affected by job creation, not job destruction. This pattern is consistent with Schumpeter's creative destruction scenario. It also raises the question of whether one might expect corresponding regional investment patterns. This in turn leads one to question the non-linearity in investment response that Haltiwanger discusses. Could this also have a regional dimension? Would we find—in a region with many establishment closures—there are externalities leading firms (that might otherwise wish to expand) to respond more slowly than they would in a region not experiencing many closures? This type of pitstop behavior—when the yellow flag slows down all racers—probably has less relevance for regions than the country as a whole.

## OTHER ISSUES

Haltiwanger clearly suggests we look intensively at establishment data in manufacturing (rather than in other sectors) because that is the best source of data. One question is whether manufacturing's overall decline as a percent of employment and total employment's decline of about 18 million are likely to influence the way we think about other sectors. Would we expect a pattern of more cyclical volatility in job destruction than in service industry job creation, for example, where total employment has been growing?

Another question is, How should we think about the amount of job destruction and job creation in the United States?

Haltiwanger (p. 55) says, "Simply put, the underlying gross microeconomic changes in activity dwarf the net changes we observe, based on published aggregates." That is, the number of jobs created and destroyed in manufacturing is 20 percent a year on average—much more than the net changes in employment. But when we look at the Organization for Economic Cooperation and Development (OECD) countries, the activity in the United States does not look that volatile. Admittedly there are many problems of coverage across countries, including the fact that the sum of job creation and job destruction tends to be larger outside manufacturing. But in 1991 the sum of job creation and job destruction for the United States was 20.3 percent, when many other OECD countries were higher (e.g., Canada 24.7 percent, Denmark 38.5 percent, France 25.6 percent, and a few lower [OECD, 1996, Table 5.3]). At first glance these results may seem paradoxical because unemployment has been much higher in Europe than the United States recently. But this kind of paradox makes even more clear the importance of the directions of Haltiwanger and his colleagues' research. To get a handle on unemployment levels, one needs to know job creation and job destruction rates, as well as the extent to which workers move from job to job. What would appear to explain the apparent paradox is that the job turnover rates in the United States are much higher than in Europe, nearly 30 percent in 1991, typically 50 percent or more than other OECD countries (OECD, 1996, Table 5.3).

## DATA COLLECTION

Haltiwanger argues for developing one longitudinal data set at the establishment level that would facilitate further research in a number of directions, including better coverage of other sectors. It is difficult to argue with this suggestion; however, given the current budgetary situation, this may well not happen. This data would be very useful, so it is worth thinking about alternative strategies to examine some of the

questions Haltiwanger has posed. Is it possible to have surveys addressed to particular questions at intervals, as opposed to having a regular multipurpose establishment survey? One advantage of periodic special-purpose surveys is that they build in a flexibility that may be highly desirable in a rapidly changing world economy. For example, the amount of statistical resources devoted to the manufacturing sector is clearly based on its importance as the principal job-creating sector a generation ago. Given the time lags and set-up costs of continuing surveys, it may make more sense for now to plan for periodic special-purpose surveys that permit asking a number of questions not built into existing longitudinal surveys.

This article is rewarding to read. It provides a very concise summary of a number of important research findings about employment, investment and productivity from establishment data; it drives home how important it is that data users understand how measures should be put together; and it makes a number of thoughtful suggestions on how surveys might be designed in the future.

## REFERENCES

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